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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/035,556 | 11/09/2001 | Rumo Satake | SEL 289 | 3617 |

7590 12/23/2003
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EXAMINER

NGUYEN, JOSEPH H

| | |
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| ART UNIT | PAPER NUMBER |
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2815

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,556

Applicant(s)

SATAKE, RUMO

Examiner

Joseph Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1, 2, 5, 6, 9-14, 17, 18, 21, 24, 25, 28, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3, 4, 7, 8, 15, 16, 19, 20, 22, 23, 26, 27, 29, 30, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 3-4, 7-8, 15-16, 19-20, 22-23, 26-27, 29-30, 33-34 in Paper No. 9 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Therefore, claims 3-4, 7-8, 15-16, 19-20, 22-23, 26-27, 29-30, 33-34 are prosecuted whereas claims 1-2, 5-6, 9-14, 17-18, 21, 24-25, 28, 31-32 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 7-8, 15-16, 19-20, 22-23, 26-27, 29-30, 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Shintani et al.

Regarding claim 3, Watanabe discloses on figure 2 a liquid crystal display device comprising pixel electrodes 15, a dielectric 8 overlapped on the ends of the pixel electrodes, an oriented film 16 covering the dielectric and the pixel electrodes, and liquid crystals 12 on the oriented film. Watanabe does not disclose the dielectric having a relative dielectric constant of not smaller than 20. However, Shinatani et al discloses

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on figure 14 the dielectric 54 having a relative dielectric constant of not smaller than 20. Note that Shintani teaches that the dielectric layer 54 is made of TiO₂ (co. 10, lines 44-45), which has a relative dielectric constant of not smaller than 20. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Watanabe by having the dielectric having a relative dielectric constant of not smaller than 20 for the purpose of obtaining an improved reflection type display apparatus (col. 1, lines 19-20).

Regarding claim 4, Watanabe discloses on figure 2 a liquid crystal display device comprising pixel electrodes 15, a dielectric 8 overlapped on the ends of the pixel electrodes, an oriented film 16 covering the dielectric and the pixel electrodes, and liquid crystals 12 on the oriented film. Watanabe does not disclose the dielectric having a relative dielectric constant of not smaller than 30. However, Shintani et al discloses on figure 14 the dielectric 54 having a relative dielectric constant of not smaller than 20. Note that Shintani teaches that the dielectric layer 54 is made of TiO₂ (co. 10, lines 44-45), which has a relative dielectric constant of not smaller than 30. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Watanabe by having the dielectric having a relative dielectric constant of not smaller than 30 for the purpose of obtaining an improved reflection type display apparatus (col. 1, lines 19-20).

Regarding claims 15-16, 22-23, Watanabe and Shintani together disclose all the structures set forth in the claimed invention.

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Regarding claims 29 and 30, the claim language is merely the intended use and therefore is not given a patentable weight.

Regarding claim 7, Watanabe discloses on figure 2 a liquid crystal display device comprising pixel electrodes 15, an oriented film 16 on the pixel electrodes, a dielectric 8 provided on the ends of the pixel electrodes, and liquid crystals 12 on the oriented film and on the dielectric. Watanabe does not disclose the dielectric having a relative dielectric constant of not smaller than 20. However, Shintani et al discloses on figure 14 the dielectric 54 having a relative dielectric constant of not smaller than 20. Note that Shintani teaches that the dielectric layer 54 is made of TiO_2 (co. 10, lines 44-45), which has a relative dielectric constant of not smaller than 20. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Watanabe by having the dielectric having a relative dielectric constant of not smaller than 20 for the purpose of obtaining an improved reflection type display apparatus (col. 1, lines 19-20).

Regarding claim 8, Watanabe discloses on figure 2 a liquid crystal display device comprising pixel electrodes 15, an oriented film 16 on the pixel electrodes, a dielectric 8 provided on the ends of the pixel electrodes, and liquid crystals 12 on the oriented film and on the dielectric. Watanabe does not disclose the dielectric having a relative dielectric constant of not smaller than 30. However, Shintani et al discloses on figure 14 the dielectric 54 having a relative dielectric constant of not smaller than 20. Note that Shintani teaches that the dielectric layer 54 is made of TiO_2 (co. 10, lines 44-45), which has a relative dielectric constant of not smaller than 30. In view of such teaching, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Watanabe by having the dielectric having a relative dielectric constant of not smaller than 30 for the purpose of obtaining an improved reflection type display apparatus (col. 1, lines 19-20).

Regarding claims 19-20, 26-27, Watanabe and Shintani together disclose all the structures set forth in the claimed invention.

Regarding claims 33 and 34, the claim language is merely the intended use and therefore is not given a patentable weight.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (703) 308-1269. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JN
November 14, 2003


GEORGE ECKERT
PRIMARY EXAMINER